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ABSTRACT

The goal of this book is to help students make sense of mathematics and become confident in their ability to do so. Section 1: "Foundations of Teaching Mathematics," includes chapters entitled: (1) "Teaching Mathematics: Reflections and Directions"; (2) "Exploring What It Means to Do Mathematics"; (3) "Developing Understanding in Mathematics"; (4) "Teaching through Problem Solving"; and (5) "Building Assessment into Instruction." Section 2: "Development of Mathematical Concepts and Procedures"; (6) "Developing Number Concepts and Number Sense"; (7) "Developing Meanings for the Operations"; (8) "Helping Children Master the Basic Facts"; (9) "Whole-Number Place-Value Development"; (10) "Mental Computation and Estimation"; (11) "Pencil-and-Paper Computation with Whole Numbers"; (12) "Developing Fraction Concepts"; (13) "Computation with Fractions"; (14) "Decimal and Percent Concepts and Decimal Computation"; (15) "Developing Concepts of Ratio and Proportion"; (16) "Developing Measurement Concepts"; (17) "Geometric Thinking and Geometric Concepts"; (18) "Logical Reasoning: Attribute and Pattern Activities"; (19) "Exploring Concepts of Probability and Statistics"; (20) "Preparing for Algebra"; and (21) "Functions and Variables." Section 3 includes chapters entitled (22) "Planning for Effective Instruction"; (23) "Teaching All Children Mathematics"; and (24) "Technology and School Mathematics." Includes Appendix A: Curriculum and Evaluation Standards for School Mathematics, Appendix B: Professional Standards for Teaching Mathematics. (Contains 426 references, an index and Blackline Masters and Materials Construction Tips.) (LH)

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